

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 4-53				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-12-021			Contract Period 09/26/2012 To 09/25/2017 Base Option Period Number 4			Title of Work Assignment/SF Site Name NPDES Vessel Reg Consideration				
Contractor EASTERN RESEARCH GROUP, INC.					Specify Section and paragraph of Contract SOW See PWS					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 09/26/2016 To 09/25/2017				
Comments: The contractor shall not commence work on this work assignment until September 26, 2016.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE:				
09/26/2012 To 09/25/2017										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:					Cost/Fee			LOE:		
Cumulative Approved:					Cost/Fee			LOE:		
Work Assignment Manager Name Jack Faulk							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Project Officer Name Meghan Hessenauer							Phone Number: 202-564-0768			
_____ (Signature)							_____ (Date)			
Other Agency Official Name							FAX Number:			
_____ (Signature)							_____ (Date)			
Contracting Official Name Brad Heath							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
9/22/2016							Phone Number: 513-487-2352			
_____ (Signature)							_____ (Date)			
							FAX Number:			

**Performance Work Statement
Contract EP-C-12-021
Work Assignment 4-53**

Title: NPDES Vessel Regulatory Considerations

Work Assignment Contracting Officer Representative (WACOR):

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Period of Performance: September 26, 2016 through September 25, 2017

Estimated Level of Effort: 7,040 hours

Purpose and Background

The purpose of this work assignment is to support EPA's National Pollutant Discharge Elimination System (NPDES) vessel permitting program. Under this work assignment, the contractor shall provide technical support in EPA Office of Wastewater Management (OWM) Water Permits Division (WPD) to develop technical materials for EPA's use in implementing the vessel general permitting program. The support shall focus primarily on developing background and supporting information for EPA's vessel permitting program, conducting research for vessel related discharge issues, and developing and providing outreach to affected stakeholders. The contractor shall provide support to EPA with the following tasks:

- Develop a work plan and provide monthly progress reports;
 - Develop a Supplemental Quality Assurance Project Plan (SQAPP), to cover work activities under this work assignment;
 - Provide research and technical support for EPA's vessel permitting program, including development of technical development documents on specific topics (e.g., ballast water management);
 - Provide technical support implementing EPA's obligations as a result of the successful Endangered Species Act (ESA) consultation for the sVGP and VGP;
 - Support implementation of the VGP and sVGP and other vessel program outreach.
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General Work Assignment Requirements (PWS Section 3.0)

Deliverable Formatting and Terminology

Throughout this work assignment, the contractor shall provide draft and final reports to EPA in electronic format, with hard copy format also provided when directed by the work assignment manager. The contractor shall discuss the computer file formats to be used for word processing, spreadsheet, database and graphics with the WACOR prior to file preparation. The WACOR will identify for the contractor which documents will be posted on EPA's Effluent Guidelines webpage. These documents posted to the Effluent Guidelines webpage must be Section 508 compliant.¹

Travel

Non-local travel by the contractor employees and/or subcontractors will be required to support the scope of this work assignment (e.g., participating in technical meetings and conferences). The contractor shall provide specific travel details and costs in a request for travel approval by the WACOR and the Contract Level Contracting Officer's Representative (CL-COR) before each trip occurs (as specified by the contract per clause H.32).

Event Expenses Not to Exceed \$20,000

No single event under this Work Assignment is anticipated to exceed \$20,000. The Contractor shall immediately notify the EPA Contracting Officer, CL-COR and WACOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

Confidential Business Information

The contractor shall, at all times, adhere to Confidential Business Information (CBI) procedures when handling industry information. The contractor shall manage all reports, documents, and other materials and all draft documents developed under this work assignment in accordance with the procedures set forth in the "Security Plan for Handling Confidential Business Information Under the Clean Water Act" (September 2002) or its successor approved plans.

Identification as Contracting Staff

To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and visiting field sites. When speaking with the public the contractor should refer all interpretations of policy to the WACOR.

Limitation of Contractor Activities

¹ See <http://www.epa.gov/epahome/accessibility.htm>.

The contractor shall submit drafts of all deliverables to the WACOR for review prior to submission of the final product. The contractor shall incorporate all WACOR comments into all final deliverables, unless otherwise agreed upon by the WACOR. The contractor will adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), CL-COR, and WACOR.

Deliverable Due Dates

For the purpose of developing this work plan, the contractor shall assume the deliverable due dates in the tables for each task presented further. Major technical deliverables shall be subject to internal contractor peer review by an expert(s) not directly involved in the mainstream Work Assignment tasks. Deliverables will be prepared with proper adherence to EPA style and format requirements.

Tasks

Task 1: Program Management (PWS Section 3.0)

The contractor shall prepare and submit a detailed work plan that outlines the approach and methodology that shall be used to perform the tasks identified in this Work Assignment. The work plan shall specify the work to be done for each task, and the allocation of personnel, hours and budget by task and deliverables. The work plan shall be submitted to the CL-COR/WACOR in accordance with contract requirements.

This task also includes contract management such as communications between EPA Contracting Officer Representatives and their respective contractor counterparts. These communications would concern the progress made on the work assignment tasks and coordination of activities to facilitate optimal contractor performance.

The contractor shall provide electronic copies of the monthly progress reports to the WACOR and CL-COR. Each progress report shall describe the technical work and expenditures for the same time period as the corresponding invoice. The reports shall list by task the amount of work completed and include a table of hours by personnel for each task. The reports also shall identify any problems or difficulties. The contractor shall inform the EPA CO, CL-COR and WACOR in writing when 50%, 75%, and 90% of the allocated hours or dollars have been expended.

In addition, the contractor shall provide semi-annual accountability report(s) about how and whether the activities/reports performed under this work assignment have furthered EPA's goals toward protecting the Great Lakes from invasive species (e.g., a short description of how funds were used for each task for both this and previous contract periods, how much was spent on each subtask, and why the work is directly relevant to the goal of preventing the introduction of new invasive species to the Great Lakes and slowing their dispersal pathways in those water bodies).

TASK 1 DELIVERABLES	DEADLINES
Work Plan	In accordance with contract requirements
Progress Reports	Monthly

Great Lakes Accountability Report - 2	Semi-annually (March 31, 2017 and August 31, 2017)
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Task 2: Quality Assurance (PWS Section 3.1)

EPA policy requires that an approved Quality Assurance Project Plan (QAPP) or Programmatic Quality Assurance Project Plan (PQAPP) be in place for work that involves the collection, generation, evaluation, analysis or use of primary environmental data. The QAPP or PQAPP defines and documents how specific data generation and collection activities shall be planned, implemented, and assessed during a particular project. This contract has an approved PQAPP for all necessary work envisioned under this work assignment, with the exception of supplemental QA/QC information required to develop sampling and analysis plans (SAPs) for new data collection activities as described below.

Background

Quality Assurance Project Plans are required under the Agency's Quality Assurance Policy CIO-2105, formerly EPA Order 5360.1 A2 (May 2000), and implementing guidance CIO-2105-P-01-0 (May 2000). All projects that involve the generation, collection, analysis, and use of environmental data must have an approved Quality Assurance Project Plan (QAPP) in place prior to the commencement of the work. Examples of these environmental data operations are provided in **Table 2-1** below.

Table 2-1. Examples of work that involves the collection, generation, evaluation, analysis, or use of environmental data

Item	Examples
Data	Includes field sampling information (sample location information, flow measurements, temperature, pH, physical observations, etc.), laboratory measurements (e.g., chemical, physical, biological, radiological measurements), data collected from questionnaires, economic data, census data, and any other types of existing data (i.e., data generated for a different purpose or generated by a different organization)
Data generation	Includes field studies, laboratory studies, and generation of modeling output
Data collection	Includes field surveys, questionnaire surveys, literature searches, and third party data
Data evaluation	Includes data inspection, review, assessment, and validation
Data analysis	Includes statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models; database creation, data extraction, and data manipulation
Data Use	Any use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, 304(m) program, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs)

Note that QAPPs are required for the development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. (A model is set of equations and assumptions used to predict unknown data.) When existing models are used as a tool to generate or evaluate data, the project QAPP must describe the model and explain how it will be used and how its output will be evaluated to ensure the modeling effort meets the overall quality objectives for the project. Development or revision of new models also must be supported by a QAPP that describes the objectives for the model, the quality criteria that will be applied to the model, and the procedures for evaluating whether the model meets those criteria.

QA Project Plan Requirements

The Contractor has previously prepared a contract-wide Programmatic QAPP (PQAPP) for Contract EP-C-12-021. This PQAPP describes, in a single document, information that is not site or time-specific, but applies throughout the program (i.e., the duration of the contract). When tasked with preparing the PQAPP, the Contractor was informed that the PQAPP may need to be supplemented with project-specific details to support individual work assignments that involve the collection, generation, evaluation, analysis, or use of environmental data.

The activities in this work assignment involve gathering, evaluating, analyzing, and otherwise using existing environmental data (also known as “secondary” use of data). EPA has determined that the Contractor is operating under the existing PQAPP and that the PQAPP addresses QA requirements for a portion of this work assignment related to existing data collection, as well as future data secondary data collections necessary to perform work under this work assignment. The applicable sections of the PQAPP are sections 4, 5, 6, 7, 8, 9 and 10.

In support of this work assignment, the Contractor shall ensure that the work plan provides enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered when collecting and analyzing existing data to support vessel discharge and management-related information collection and analysis efforts.
- The type of data to be gathered or used under this work assignment to support the project objectives—including data from search engines, federal databases, EPA databases—as a well as a rationale for when those databases are appropriate and what data available in each will support the project
- The quality objectives needed to ensure the data will support the project objectives, and
- The QA/QC activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

Additional QA Documentation Required

The EPA Quality Manual for Environmental Programs (CIO 2105-P-01-0, May 2000) requires published Agency reports containing environmental data to be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their originally intended application. The EPA Quality Manual further requires Agency reports to be reviewed by the QA manager (or other authorized official) before publication to ensure that an adequate discussion of QA and QC activities is included. The purpose of the review is to ensure the reports provide enough information to enable a knowledgeable reader to determine if the technical and quality goals were met for the intended

use of the data. Reports should include applicable statements regarding the use of any environmental data presented as a caution about possible misuse of the data for other purposes. For example, a Technical Support Document or Study Report must include a clear discussion of the quality management strategies (including the project goals and objectives, quality objectives and criteria, and QA/QC practices) that were employed to control and document the quality of data generated and used. These documents should also discuss any deviations from procedures documented in the EPA-approved QAPP(s) supporting the project, the reasons for those deviations, any impact of those deviations had on data quality, and steps taken to mitigate data quality issues.

In support of this Agency requirement, all major deliverables (e.g., Reports) produced by the Contractor under this work assignment must include a discussion of the QA/QC activities that were performed to support the deliverable, and this discussion must provide a sufficient level of detail to allow the EAD QA Coordinator (or designee) to determine if the QA/QC strategies implemented for the project sufficiently support the intended use of the data. Upon receipt, the WACOR will review each applicable report and certify whether the Contractor has adhered to the QA requirements documented in the Contractor's PQAPP.

The Contractor also shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the QAPP, and corrective actions taken. If desired, the Contractor may include this as a part of the contract-required monthly financial/technical progress report.

TASK 2 DELIVERABLES	DEADLINES
Monthly reports of QA work performed (may be included in the Contractor's monthly progress report)	Monthly

Task 3: Ballast Water Management Evaluation (PWS Sections 3.2, 3.5, 3.6, and 3.7)

Managing the discharge of ballast water is a critical component of aquatic nuisance species control. This task includes preparation of a technical development document, started under a previous work assignment (#3-53), assessing the state of ballast water management systems for vessels that transit into freshwater as well as marine ecosystems, including options available for both existing and new vessels. This assessment will investigate the full range of ballast water management system (BWMS) options, including activities such as best management practices, ballast water exchange, and treatment. Both on-ship and off-ship (e.g., on-shore) ballast water treatment systems options will be considered for the full range of domestic and international vessels covered under EPA's Vessel General Permit (VGP) as well as vessels less than 79 feet in length that may otherwise be covered under EPA's Small Vessel General Permit (sVGP). The report will provide BWMS options for both inland and marine vessels, including vessel activities in the Great Lakes (i.e., pre- and post-2009 Lakers and other vessels traversing the Great Lakes). The assessment will consider biological effectiveness, cost, logistics, operations, regulatory implications, safety, and any other areas that may affect ballast water management, including challenges presented by freshwater ecosystems. The assessment will look at both shipboard

treatment and off-ship reception facilities to determine the availability and economic and logistical feasibility of these two options for the treatment of ballast water from the different categories/classes of vessels. Specifically, this assessment will consider if onshore treatment or other off-ship treatment, such as on a treatment barge, are reasonable, or preferred, alternatives to shipboard treatment for any universe of vessels covered under the VGP, including an assessment of the time necessary to implement such an approach if such is found to be a reasonable alternative. Unique characteristics of classes/categories of vessels will be considered in context with BWMS options to determine whether specific management/treatment options are “available” for these vessels considering the unique operational and design constraints of such vessels (e.g., large volumes of fresh cold water required and the short duration of trips for Lakers). This assessment will also evaluate Lakers built after 2009 since these vessels face many of the same challenges and constraints as pre-2009 Lakers. As appropriate, this assessment will evaluate a variety of environmental (e.g., temperature and salinity), operational (e.g., ballasting flow rates and holding times), and vessel design (e.g., ballast volume and unmanned barges) parameters to consider in determining applicable discharge requirements.

Tentative Ballast Water Management Technical Development Document Outline

1. Introduction
2. Ballast Water Regulations/Requirements to Prevent ANS Introduction and Propagation
3. Ballast Water Management Considerations
4. Vessel Universe
5. Best Management Practices
6. Ballast Water Treatment Principals
7. Commercially Available Ballast Water Treatment Systems
8. Ballast Water Management System Performance
9. Ballast Water Management System Costs
10. Compliance Monitoring
11. Off-ship Ballast Water Treatment
12. Ballast Water Alternatives
13. References

Some smaller vessels, because of their unique designs and operations might be able to use onboard potable water for ballasting. This is particularly true for vessels that use ballast to compensate for fuel burn-off and sewage generation. Protecting the Great Lakes from the introduction of new invasive species is one of the priorities of EPA and the Federal Government and potential applications of this technology to that end is also a goal of this task. Under a previous work assignment (#2-53 and #3-53), the Contractor developed a report (Feasibility and Efficacy of Using Potable Water Generators as an Alternative Option for Meeting Ballast Discharge Limits, EPA 830-R-15-002, July, 2015) evaluating whether such systems can be used as an effective form of ballast water management for these vessels, and if so, whether they are environmentally effective. The contractor shall support EPA’s dissemination of the findings of this report as a way to further gauge the feasibility of implementing such technologies for the control of ballast water discharges through outreach such as journal articles, fact sheet, etc.

Task 3 - Deliverables:

Deliverable	Deadline
Journal article(s), as requested by WACOR	According to a schedule developed by ERG and approved by the WACOR
Fact Sheet and other outreach materials	<ul style="list-style-type: none"> - Draft within 30 days of WACOR request - Revisions within 10 days after receipt of comments from WACOR
Preliminary BWTS Technical Development Document	Draft – March 31, 2017, unless specified otherwise by the WACOR through technical direction
Revised BWTS Technical Development Document	Revisions within 1 month after receipt of comments from WACOR unless specified otherwise through technical direction

Task 4: Evaluate Vessel Best Management Practice Efficacy (PWS Sections 3.2, 3.5, and 3.6)

In a previous work assignment (#3-53), the contractor completed a report entitled: “Analysis of Ballast Water Discharges into the Great Lakes from Overseas Vessels from 2010 to 2013” which provides information on ballast water discharges from ocean-going vessels entering the Great Lakes. Information in that report is useful to assess aquatic nuisance species invasion risks into the Great Lakes by these vessels. Following up on that report, the contractor initiated an evaluation of the availability of data on the movement of vessels within the Great Lakes as well as vessels arriving to the Great Lakes from other U.S. coastal and fresh water ports, and the associated uptake and discharge of ballast water. Based on the availability of data, the contractor will prepare report(s) that summarizes vessel routes entering the Great Lakes Basin, as well as routes within the lakes and originating from other fresh water ports, including vessel type (e.g., commercial, recreational) and possible vectors (e.g., hull fouling, ballast water, recreational boat trailer). The report will also include information on the ranges and populations of ANS currently inhabiting the Great Lakes. The contractor shall aim to identify the highest risk routes and vessels/vector combinations. This report shall also identify a number of aquatic nuisance species (ANS), as agreed to with the WACOR, that will be used for a qualitative discussion of high risk vectors (e.g., ballast water from Lakers, recreational vessels, and fishing vessels, etc.) in the Great Lakes.

Based on the findings of the effort identified above, the Contractor may be requested to develop a suite of strategies or tools to address inter-lake transfer of ANS.

Task 4 - Deliverables:

Deliverable	Deadline
Phase I Great Lakes Inter-Lake Transfer Report	<ul style="list-style-type: none"> - Draft report within 4 months after EPA acceptance of final outline - Revisions within 1 month after receipt of comments from WACOR

Follow-up Great Lakes Inter-Lake Transfer Report (Strategies and Tools)	- As specified in technical direction from the WACOR based on findings from Phase I Report
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Task 5: Provide Technical and Implementation Support to EPA’s Vessel General Permitting Program (PWS Sections 3.2, 3.5, 3.6, and 3.7)

The Contractor shall support EPA’s development of technical and factual materials for EPA use in implementing its Vessel General Permitting Program, including work on both the VGP and sVGP, as appropriate. Work may include supporting the development of draft permit language and rationale (including both effluent limitations and other permit requirements) and other permit related background information.

The contractor shall perform literature reviews, develop background materials, research technologies, and work with industry experts and government officials to develop a solid foundation for instituting national permit effluent limits and other conditions. The contractor may be asked to update existing technical development documents (TDDs) and produce or finalize up to 2 additional TDDs, in addition to the TDD identified in Task 3. EPA expects these efforts to include technical memoranda (plus appendices with relevant data) describing the sources of information, key findings from those sources, technological capabilities and efficacy, cost information where relevant, and what conclusions, if any, can be drawn from this information. Once final, these TDDs shall be of sufficient quality to place in the docket and serve as part of the administrative record for decision-making. Subject areas which may be researched include, but will not be limited to:

1. Advances in anti-foulant hull coating technologies/and pollution and invasive species control options
2. Evaluations of information submitted as part of EPA’s monitoring requirements
3. Monitoring approaches to assess vessel discharges
4. Status on the availability and technical feasibility of using environmental acceptable lubricants on vessels, including the extent to which vessels have converted to these applications as a result of VGP/sVGP requirements.
5. Other discharge types and treatment options as necessary.

In addition, upon receiving written direction from the WACOR, the contractor shall assist EPA in the issuance/modification of the VGP or sVGP. This may include assembling key background information, providing docket support, and assisting in preparation of briefing materials. Contractor support for permit development may include activities such as an assessment of existing permit requirements; preparation of technical memoranda, background information, and briefing materials; and docket compilation.

The contractor shall also support EPA in the reissuance of the next VGP, including collecting and compiling information and developing analyses, studies, and other supporting documentation; assisting with formatting the permit, fact sheet, and other permit documents for general consistency; assisting with the ESA consultation; conducting a cost analysis for the permit requirements and development of a comment response database and assisting with the

comment response categorization and response document. In addition, the contractor shall provide support to EPA in developing outreach strategies and materials to improve compliance.

The contractor shall also develop an economic and benefits analysis to examine the market and non-market impacts to society from EPA's issuance of vessel general permits. This work will build off of the existing analyses prepared for the 2013 VGP and 2014 taking into account any revisions to these permits as well as any changes in other considerations that affect such analysis.

Task 5 - Deliverables:

Deliverable	Deadline
Technical Development Document	Based on technical direction from the WACOR
Briefing Materials	Based on technical direction from the WACOR
Targeted Assessment of Permit Conditions	Based on technical direction from the WACOR
Economic and Benefits Analysis	Based on technical direction from the WACOR
Technical Memorandum and Background Information	Based on technical direction from the WACOR
Permit Docket Support, including Comment Response	Based on technical direction from the WACOR

Task 6: Provide Technical Support Implementing EPA's Obligations as a Result of the Successful Endangered Species Act (ESA) Consultation for the sVGP and the VGP (PWS Sections 3.2, 3.6, and 3.7)

On November 28 and 29, 2012, EPA successfully concluded formal consultation with NOAA Fisheries and the Fish and Wildlife Service (i.e., the Services) on the VGP and sVGP. As a result of that consultation, EPA agreed to some follow-up implementation activities as described in the Services Biological Opinion recommendations. These activities include preparing a monitoring plan, periodically analyzing and compiling data on vessel discharges as identified in that plan, and periodically reviewing whether there have been new aquatic nuisance species introductions into U.S. waters.

EPA, in consultation with the Services, developed the monitoring plan (with the current working draft dated December 2014) for how to approach the analyses of the vessel discharge data. The contractor may be asked to support modification or finalization of that plan to better characterize vessel discharges and activities that may affect listed species and/or critical habitat.

Also, the contractor shall support analyzing vessel data, specified invasive species databases, and other data sources as applicable to provide information to the EPA consistent with the latest version of the monitoring plan. The monitoring data report will provide a summary of available VGP monitoring data and an assessment of the potential impacts to listed species from specific vessel waste streams in the different regions of the United States, including the Great Lakes and other freshwater ecosystems.

Task 6 - Deliverables:

Deliverable	Deadline
Revise Endangered Species Monitoring Plan	Draft within 1 month of technical direction from WACOR and any revisions within 2 weeks of receipt of comments from WACOR.
Endangered Species Monitoring Data Analysis Report Outline	Based on technical direction from the WACOR.
Endangered Species Monitoring Data Analysis Report	1 month after receipt of comments from WACOR unless otherwise specified through technical direction.
Aquatic Nuisance Species Analysis	Based on technical direction from the WACOR.

Task 7: Ballast Water Treatment System Sensor Inventory and “Next Generation” Ballast Water Monitoring

Ballast water treatment sensor and next generation ballast water monitoring work, performed under Task 7 on the previous work assignment (i.e., WA 3-53), will now be performed under Task 3 for this work assignment.

Task 8: Outreach (PWS Section 3.7)

The Contractor shall support EPA with the development of materials for implementation and outreach associated with the control of discharges from vessels. The contractor shall prepare technical materials such as 1-2 page factsheets and power point presentations on permit conditions, internal as well as external stakeholder meetings, or briefings for senior management. Contractor shall assume up to 5 short implementation fact sheets and implementation checklists. Some of those fact sheets may need to be translated into languages of the IMO (French, Spanish, Chinese, Russian, and/or Arabic). The contractor shall also support up to 3 online webinars as requested by the WACOR.

The Contractor shall develop a report that summarizes the characteristics and conditions of vessels and vessel practices that could enter freshwater and other ecosystems based on, among other sources, information (i.e., from Notices of Intent, Notices of Termination, Vessel One-Time Reports, and Annual Reports) submitted to EPA under both the 2008 and 2013 VGPs. The report will also analyze vessels and vessel activities based on location to the extent possible, such as to identify the types of vessels operating on the Great Lakes and their operational and discharge characteristics.

Task 8 - Deliverables:

Deliverable	Deadline
Briefing Materials	Based on technical direction from the WACOR
Online Meeting/Webinar Support	<ul style="list-style-type: none"> - Registration pages within 2 weeks after technical direction from WACOR. - Summary reports within 2 weeks after completion of meeting/webinar.

Technical Memorandum and Background Information	Based on technical direction from the WACOR
Brochures, Fact Sheets, Other Outreach Materials	Based on technical direction from the WACOR
Draft VGP Summary Report Outline	Based on technical direction from the WACOR
Revised VGP Summary Report Outline	1 week after receipt of comments on Draft Report Outline from WACOR
Draft VGP Summary Report	2 months after EPA acceptance of Final Revised VGP Summary Report Outline
Revised VGP Summary Report	2 weeks after receipt of comments from EPA

CHECKLIST-- Justification for Use of an Existing PQAPP for the Quality Documentation for Projects that Rely on Existing Data

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
A1. Title & Approval Sheet			
Project title	X		
Organization's name	X		
Effective date and/or version identifier	X		
Dated signature of Organization's project manager	X		
Dated signature of Organization's QA manager	X		
Other signatures, as needed (e.g., EAD Project Officer, EAD QA Coordinator)	X		
Revision History	X		
A2. Table of Contents			
Includes sections, figures, tables, references, and appendices	X		
Document control information indicated (when required by the EPA Project Manager and QA Manager)	X		
A3. Distribution List			
Includes all individuals who are to implement or otherwise receive the QAPP and identifies their organization	X		
A4. Project/Task Organization			
Identifies key individuals with their responsibilities (e.g., data users, decision makers, project QA manager, Subcontractors, etc.) and contact info.	X		
Organization chart shows lines of authority & reporting responsibilities	X		
Project QA manager position indicates independence from unit collecting/using data	X		
A5. Problem Definition/Background			
Clearly states problem to be resolved, decision to be made, or hypothesis to be tested	X		
Identifies project objectives or goals	X		
Historical & background information	X		
Cites applicable technical, regulatory, or program-specific quality standards, criteria, or objectives	X		
A6. Project/Task Description			
List measurements to be made/data to obtain	X		
Notes special personnel or equipment requirements	X		
Provides work schedule	X		
A7. Overall Quality Objectives & Criteria			
States overall quality objectives and limits needed to support the project goals and objectives cited in A5	X		

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
A8. Special Training Requirements/ Certifications			
Identifies specialized skills, training or certification requirements	X		
Discusses how this training will be provided/the necessary skills will be assured and documented	X		
A9. Project-level Documents & Records			
Describes process for distributing the approved QAPP and other planning documents (and updates) to staff	X		
Identifies final work products that will result from the project	X		
Describes the process for developing, reviewing, approving, and disseminating the final work products and individuals responsible for these processes	X		
B1. Data Needs			
Detailed list/description of the specific data elements needed to support project goals	X		
Description of the scope of the data elements that you need (e.g., data supporting specific treatment options vs. the full range of options, data supporting the entire country vs. a specific geographic region)	X		
If project includes development or update of a project database, QAPP identifies and defines each database field	X		
B2. Potential Data Sources			
Identifies and describes potential sources of the existing data needed (e.g., photographs, topographical maps, facility or state files, census data, meteorological data, publications, etc.) and the rationale for their use	X		
If literature searches are used, describes the search engines that will be used and key search terms	X		
If databases or models will be used, describe the database (or model) in terms of who developed it and operates it and the type of data it contains	X		
For other potential sources, describe the potential sources & rationale for considering or using each one	X		

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
B3. Criteria for Selecting Data Sources			
Identifies each criterion that will be used to determine if the candidate data sources listed in B2 will meet your needs, and how each criterion is defined. (Criteria vary by project; examples include reliability, age, applicability, quantity, format, and others)	X		
Explains rating system used to evaluate source against each criterion	X		
B4. Data Value Selection Approach			
For data sources that meet the criteria identified in B3: Describes the criteria and procedures that will be used to determine which value(s) identified in the acceptable sources are most appropriate for use in the project	X		
For data that do not meet these pre-established criteria but are the only data available, explains how the decision to use such data will be made and documented	X		
B5. Resolving Data Gaps			
Describes the process for identifying and addressing data gaps that still exist after candidate data sources have been evaluated and appropriate data values have been identified	X		
Describes the process that will be used to address any new data needs revealed during the data gathering process (i.e., additional data elements not previously considered)	X		
B6. Data Gathering Documentation and Records			
Describes how results of the source selection and the data value selection will be documented, including any sources or values that were rejected and the rationale for not using them	X		
For data that are deemed acceptable and that will be used, explains how each data element will be associated to its original source citation (i.e., bibliographic information, telephone contact reports, email messages, etc.)	X		
C1. Standardization of Data Elements			
Describes the process to ensure that units and other key measures are captured and standardized (or otherwise made comparable) in the database	X		

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
If the project requires that all fields be standardized to a single set of units (e.g., US dollars for economic data, µg/L for chemical data), identifies the standard units that will be required for each data element	X		
Identifies the procedures for converting data reported in other units to the standardized units, including any rounding or truncating procedures, and procedures for ensuring these conversions are performed correctly	X		
If standardization of data elements is not needed, explains the process for ensuring that data presented in varying units are comparable enough for use in the project and that project staff members and other data users will be able to readily identify differences in units	X		
C2. Data Entry			
Explains the process for manually entering selected data into the project database, who will be responsible for such data entry, and the QC strategies that will be used to ensure that the database accurately and completely captures the data as presented in the original source	X		
C3. Merging or Uploading Electronic Data from Existing Sources			
If data are available electronically and will be uploaded or merged into the project database: describes the procedures that will be followed to ensure that errors are not introduced during the upload/merge process and that the final database reflects the original dataset(s)	X		
C4. Data Review			
Describes the process for ensuring that the data have been recorded, transmitted, and processed correctly	X		
C5. Data Storage and Manipulation			
Describes how the existing data will be stored	X		
Describes who will be responsible for access to and maintenance of the stored data	X		
Describes how the existing data will be incorporated with other project data to support the project goal/decision to be made	X		

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
Describes the QC strategies that will be employed to ensure that the integrity of the data is not compromised during data storage, access/retrieval, updates, or other manipulation	X		
D1. Data Quality Verification and Data Quality Reporting			
Describes the process for verifying that the final set of data meets the overall criteria originally specified for the project	X		
Describes how these determinations will be documented and reported	X		
For data that don't meet the pre-established specifications, explains the process for determining if they are usable and how such decisions will be documented	X		
D2. Use/Analysis of the Existing Data			
Provides details regarding the exact means in which the data will be used to meet project objectives	X		
Includes an explanation or list of the information to be calculated and the data elements that will be used to make those calculations	X		
Includes applicable calculations and equations (if known) or explanations of how they will be developed	X		
Includes plans for excluding outliers			
D3. Methodology Documentation and Conceptual Review			
If exact methodologies for analyzing the data will need to be developed or modified during the course of data analysis, explains the process by which such methodologies will be documented, who is responsible for reviewing/ approving their use, and how the methodologies will be checked to ensure they yield the desired products	X		
D4. Technical Review of the Data Analysis			
Describes activities that will be used to ensure the data analyses are being implemented as specified and will support project objectives	X		
Explains procedures for identifying and notifying appropriate personnel if changes to the originally planned procedures are warranted, and the process for approving, documenting and implementing such changes	X		

QAPP Element	Sufficiently Addressed in PQAPP	Not Applicable to Project	Explanatory Comments
D5. Final Verification of Data Analysis and Reconciliation with User Requirements			
Describes the process for reviewing the final work product to ensure that the work was generated in accordance with the QAPP, and that the work product addresses the overall project goals and objectives	X		
Describes how the results of this assessment will be documented	X		
Describes how any limitations of the data or data analyses that were used to prepare the final work product will be documented and communicated	X		